Report No.: DDT-RE23030821-2E05

Issued Date: Apr. 15, 2023

FCC CERTIFICATION TEST REPORT

FOR

Applicant	**:**	Guoguang Electric Co.,Ltd
Address	**:**	No. 8 Jinghu Rd, Xinya Street, Huadu Region, Guangzhou P. R. China 510800
Equipment under Test	**:**	Portable Wireless Speaker
Model No.	**:**	VIFA062
Trade Mark	**:**	vifa
FCC ID	**:**	2AAP8-VIFA062
Manufacturer	**:**	Vifa Denmark ApS
Address	**:**	Jukkerup Vaenge 1, 4420 Regstrup, Denmark

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808

Tel.: +86-0769-38826678, **E-mail:** ddt@dgddt.com, http://www.dgddt.com

REPORT

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Test Report Declare

Applicant	:	Guoguang Electric Co.,Ltd
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Model No.	:	VIFA062
Trade Mark	:	vifa
Manufacturer	:	Vifa Denmark ApS
Address	:	Jukkerup Vaenge 1, 4420 Regstrup, Denmark

Test Standard Used:

FCC Rules and Regulations Part 15 Subpart E

Test procedure used: ANSI C63.10:2013, 789033 D02 General U-NII Test Procedures New Rules v02r01, KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02(2016-04-08), KDB 905462 D03 Client Without DFS New Rules v01r01(2014-08-14)

We Declare:

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.

Report No:	DDT-RE23030821-2E05		
Date of Receipt:	Mar. 25, 2023	**Date of Test:**	Mar. 25, 2023 ~ Apr. 15, 2023

Prepared By:

Bobo Chen

Bobo Chen/Engineer

Approved By:

DONGGUAN DONGDIAN TESTING SERVICE CO., LTD. APPROVED Damon Hu

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Apr. 15, 2023	

1. Summary of Test Results

The EUT have been tested according to the applicable standards as referenced below.		
Description of Test Item	**Standard**	**Results**
6/26db Bandwidth	FCC 15.407 (e)	PASS
Maximum Conducted Output Power	FCC 15.407 (a)	PASS
Power Spectral Density	FCC 15.407 (a)	PASS
Frequency Stability Measurement	FCC 15.407 (g)	PASS
Emissions in restricted frequency bands	FCC 15.407 (b) FCC 15.209 FCC 15.205	PASS
Band Edge Compliance	FCC 15.407 (b) FCC 15.209 FCC 15.205	PASS
Power Line Conducted Emission	FCC 15.207	PASS
Antenna requirement	FCC 15.203	PASS
Dynamic Frequency Selection	FCC 15.407 (h)	PASS

2. General Test Information

2.1. Description of EUT

EUT Name	:	Portable Wireless Speaker
Model Number	:	VIFA062
EUT function description	:	Please reference user manual of this device
Power Supply	:	Input: 5VDC, 3A; 9VDC, 3A; 12VDC, 3A; 15VDC, 3A; 20VDC, 3A DC 7.20V/12800mAh Polymer Li-ion built-in battery
Radio Technology	:	IEEE 802.11a/n/ac
Operation frequency	:	IEEE 802.11a: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11n HT20: 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11n HT40: 5190MHz-5230MHz, 5270MHz-5310MHz, 5510MHz-5670MHz, 5755MHz-5795MHz IEEE 802.11ac HT20: 5180MHz-5240MHz, 5260MHz-5320MHz,5500MHz-5700MHz, 5745MHz-5825MHz IEEE 802.11ac HT40: 5190MHz-5230MHz, 5270MHz-5310MHz, 5510MHz-5670MHz, 5755MHz-5795MHz IEEE 802.11ac HT80: 5210MHz, 5290MHz, 5530MHz,5610MHz, 5775MHz
Modulation	:	IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Transmitter rate	:	IEEE 802.11a: up to 54 Mbps IEEE 802.11n HT20: up to 72.2 Mbps IEEE 802.11n HT40: up to 150 Mbps IEEE 802.11ac VHT20: up to 86.7 Mbps IEEE 802.11ac VHT40: up to 200 Mbps IEEE 802.11ac VHT80: up to 433.3 Mbps
Antenna Type	:	FPC antenna, maximum PK gain: 4.62 dBi
Sample Number	:	S23030821-16 for conductive S23030821-17 for radiation

Note: EUT is the ab. of equipment under test.

Channel information					
IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40)		IEEE 802.11ac (VHT80)	
UNII-1					
CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230	/	/
44	5220	/	/	/	/
48	5240	/	/	/	/
UNII-2A					
52	5260	54	5270	58	5290
56	5280	62	5310		/
60	5300	/	/	/	/
64	5320	/	/	/	/
UNII-2C					
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	/	/
112	5560	126	5630	/	/
116	5580	134	5670	/	/
120	5600	/	/	/	/
124	5620	/	/	/	/
128	5640	/	/	/	/
132	5660	/	/	/	/
136	5680	/	/	/	/
140	5700	/	/	/	/
UNII-3					
149	5745	151	5755	155	5775
153	5765	159	5795	/	/
157	5785	/	/	/	/
161	5805	/	/	/	/
165	5825	/	/	/	/

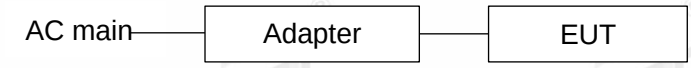
2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Description	Remark
Type-C cable	VIFA	N/A	Length: 2.0m, unshielded	N/A
AUX IN cable	VIFA	N/A	Length: 2.0m, unshielded	N/A
AC Adapter	VIFA	P0571-BZ	Input: 100-240V~, 50/60Hz, 1.5A Max; Output: 5VDC, 3A; 9VDC, 3A; 12VDC, 3A; 15VDC, 3A; 20VDC, 3A	N/A

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	FCC ID/IC
M6a Plus Mesh Wi-Fi Router	Mercku Technology (China), Inc.	M6a Plus	N/A	2APR4-M6P 23877-M6P

2.4. Block diagram of EUT configuration for test



Test software: adb.exe

The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table.

The pathloss of external cable: 2 dB (According to the manufacturer's claims)

Tested mode, channel, and data rate information				
Mode	Setting Tx Power	data rate (Mpbs) (see Note)	Channel	Frequency (MHz)
IEEE 802.11a	Default	6	Low: CH36	5180
	Default	6	Middle: CH40	5200
	Default	6	High: CH48	5240
	Default	6	Low: CH52	5260
	Default	6	Middle: CH56	5280
	Default	6	High: CH64	5320
	Default	6	Low: CH100	5500
	Default	6	Middle: CH116	5580
	Default	6	High: CH140	5700
	Default	6	Low: CH149	5745
	Default	6	Middle: CH157	5785
	Default	6	High: CH165	5825
IEEE 802.11n HT20	Default	MCS 0	Low: CH36	5180
	Default	MCS 0	Middle: CH40	5200
	Default	MCS 0	High: CH48	5240
	Default	MCS 0	Low: CH52	5260
	Default	MCS 0	Middle: CH56	5280
	Default	MCS 0	High: CH64	5320
	Default	MCS 0	Low: CH100	5500
	Default	MCS 0	Middle: CH116	5580
	Default	MCS 0	High: CH140	5700
	Default	MCS 0	Low: CH149	5745
	Default	MCS 0	Middle: CH157	5785
	Default	MCS 0	High: CH165	5825
IEEE 802.11n HT40	Default	MCS 0	Low: CH38	5190
	Default	MCS 0	Middle: CH46	5230
	Default	MCS 0	High: CH54	5270
	Default	MCS 0	Low: CH62	5310
	Default	MCS 0	Middle: CH102	5510

	Default	MCS 0	High: CH110	5550
	Default	MCS 0	Low: CH134	5670
	Default	MCS 0	Middle: CH151	5755
	Default	MCS 0	High: CH159	5795
IEEE 802.11ac VHT80	Default	MCS 0	CH42	5210
	Default	MCS 0	CH58	5290
	Default	MCS 0	CH106	5530
	Default	MCS 0	CH122	5610
	Default	MCS 0	CH155	5775
Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.				

2.5. Deviations of test standard

No Deviation.

2.6. Test environment conditions

Temperature range:	+15℃ to +35 ℃
Humidity range:	20% to 75%
Pressure range:	86 kPa to106 kPa

2.7. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808

Tel.: +86-0769-38826678, http://www.dgddt.com, Email: ddt@dgddt.com

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2.8. Measurement uncertainty

Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Frequencies Stability	6.7×10^{-8} (Antenna couple method)
	5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB (10 MHz ≤ f < 3.6GHz);
	1.40 dB (3.6 GHz ≤ f < 8 GHz)
	1.66 dB (8 GHz ≤ f < 26.5 GHz)
Uncertainty for radio frequency (RBW<20kHz)	3×10^{-8}
Temperature	0.4℃
Humidity	2%
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30MHz-1GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1GHz-40GHz)	4.10 dB (1-6 GHz)
	4.40 dB (6 GHz-18 GHz)
	3.54 dB (18 GHz-26 GHz)
	4.30 dB (26 GHz-40 GHz)
Uncertainty for Power line conduction emission test	3.32 dB (150 kHz-30 MHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

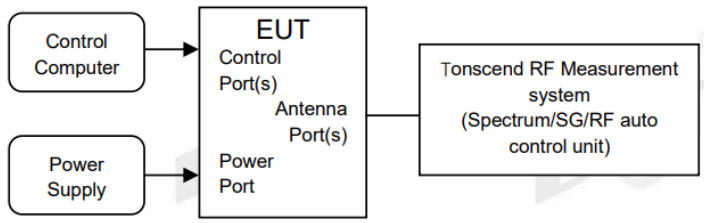
3. Equipment Used During Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☒RF Connected Test (Tonscend RF Measurement System 3#)					
Signal &Spectrum analyzer	R&S	FSV40	101407	Jul. 21, 2022	1 Year
Wideband Radio Communication tester	R&S	CMW500	117491	May 18, 2022	1 Year
Vector Signal Generator	Agilent	N5182A	MY19060405	May 18, 2022	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180912	May 18, 2022	1 Year
RF Control Unit	Tonscend	JS0806-2	20C8060230	May 18, 2022	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	May 26, 2022	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.3.2.22	N/A	N/A
☒Radiation 3#chamber					
EMI Test Receiver	R&S	ESU26	100472	May 19, 2022	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	May 17, 2022	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Sep. 29, 2022	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	01429	Jul. 22, 2022	1 Year
Double Ridged Horn Antenna	Schwarzbeck	BBHA9120 D	02468	Sep. 29, 2022	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	May 06, 2022	1 Year
Pre-amplifier	COM-POWER	PAM-118A	18040084	Aug. 17, 2022	1 Year
Pre-amplifier	COM-POWER	PAM-840A	461369	Apr. 11, 2022 Apr. 11, 2023	1 Year
RE Cable	N/A	W23.02 CP1-X2 + W23.09 AP1-X8+ JCT26S-NJ-NJ-1.5M+ JCT26S-NJ-NJ-1.5M	4.5M+8M+1.5M+ 1.5M	Aug. 17, 2022	1 Year
RF Cable	Yuhu Technology	JCTB810-NJ-NJ-9M	21123964	May 19, 2022	1 Year
RF Cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	21073466	Aug. 17, 2022	1 Year
Micro-Tronics filters	REBES	BRM50702	G555	N/A	N/A
Micro-Tronics filters	REBES	BRM50716	G392	N/A	N/A
High Pass filter	XB	XBLBQ-GTA67	210820-2-3	N/A	N/A
Test software	Tonscend	JS32-RE	V 5.0.0.1	N/A	N/A
Test software	Audix	E3	V 6.1.1.1	N/A	N/A
☒Power Line Conducted Emissions Test 1#					
Test Receiver	R&S	ESCI	100551	Aug. 26, 2022	1 Year

LISN 1	R&S	ENV216	101109	Aug. 26, 2022	1 Year
LISN 2	R&S	ESH2-Z5	100309	Aug. 26, 2022	1 Year
Pulse Limiter	R&S	ESH3-Z2	101242	Aug. 26, 2022	1 Year
CE Cable 1	HUBSER	N/A	W10.01	Aug. 26, 2022	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
Test Receiver	R&S	ESCI	100551	Aug. 26, 2022	1 Year

4. 26dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
26 dB Bandwidth	---	5150 - 5250
	---	5250 - 5350
	---	For FCC: 5470 - 5725 For IC: 5470 - 5600 5650 - 5725

4.3. Test procedure

Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	approximately 1% of the emission bandwidth.
VBW	> RBW
Trace	Max hold
Sweep	Auto couple

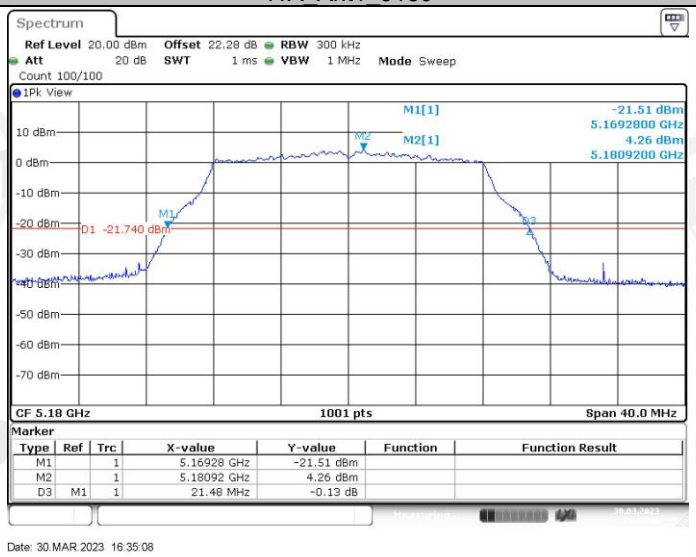
Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 26 dB relative to the maximum level measured in the fundamental emission.

4.4. Test result

Test Mode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	21.48	5169.28	5190.76	---	---
		5200	21.60	5189.24	5210.84	---	---
		5240	21.48	5229.32	5250.80	---	---
		5260	21.52	5249.28	5270.80	---	---
		5280	21.60	5269.24	5290.84	---	---
		5320	21.44	5309.36	5330.80	---	---
		5500	21.48	5489.32	5510.80	---	---
		5580	21.52	5569.28	5590.80	---	---
		5700	21.52	5689.28	5710.80	---	---
		5745	21.52	5734.32	5755.84	---	---
		5785	21.56	5774.24	5795.80	---	---
		5825	21.56	5814.28	5835.84	---	---
11N20SISO	Ant1	5180	21.84	5169.08	5190.92	---	---
		5200	21.80	5189.12	5210.92	---	---
		5240	21.92	5229.04	5250.96	---	---
		5260	21.88	5249.12	5271.00	---	---
		5280	21.80	5269.12	5290.92	---	---
		5320	21.84	5309.16	5331.00	---	---
		5500	21.80	5489.12	5510.92	---	---
		5580	21.96	5569.04	5591.00	---	---
		5700	21.92	5689.00	5710.92	---	---
		5745	21.88	5734.08	5755.96	---	---
		5785	21.88	5774.08	5795.96	---	---
		5825	21.80	5814.16	5835.96	---	---
11N40SISO	Ant1	5190	40.24	5169.92	5210.16	---	---
		5230	40.16	5210.08	5250.24	---	---
		5270	40.16	5250.08	5290.24	---	---
		5310	40.16	5290.00	5330.16	---	---
		5510	40.16	5490.00	5530.16	---	---
		5550	40.16	5530.00	5570.16	---	---
		5670	40.00	5650.08	5690.08	---	---
		5755	40.16	5735.00	5775.16	---	---
		5795	40.16	5775.00	5815.16	---	---
11AC80SISO	Ant1	5210	82.08	5169.04	5251.12	---	---
		5290	82.08	5249.20	5331.28	---	---
		5530	81.76	5489.36	5571.12	---	---
		5610	81.92	5569.04	5650.96	---	---
		5775	82.24	5734.04	5816.28	---	---

4.5. Test graphs

11A_Ant1_5180



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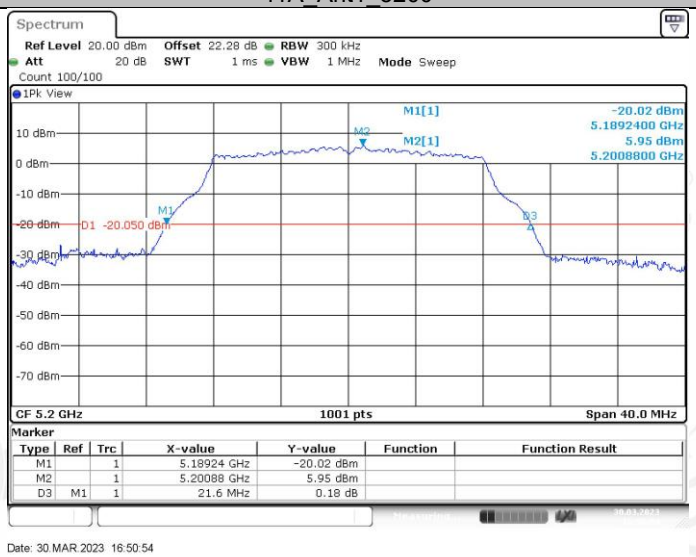

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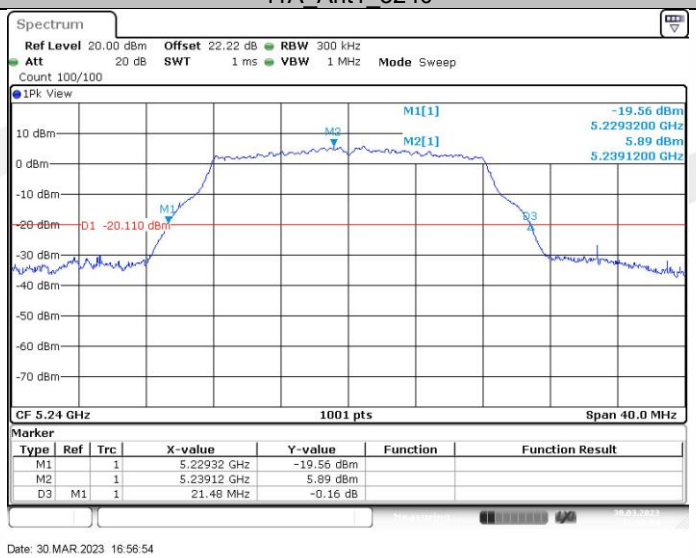

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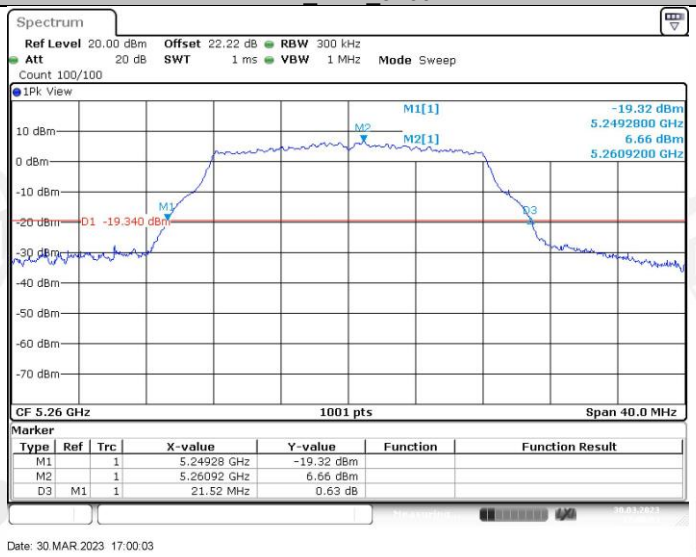

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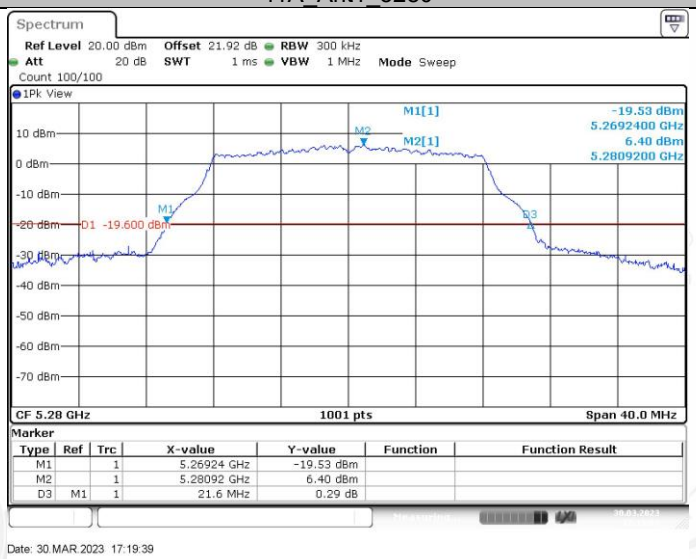

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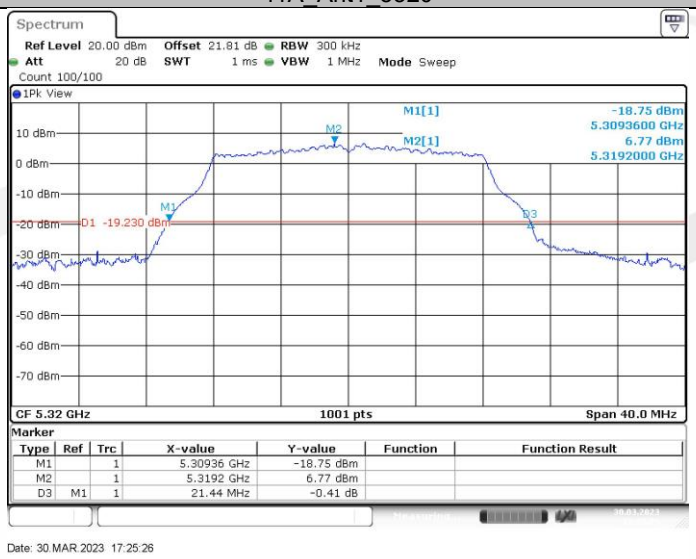

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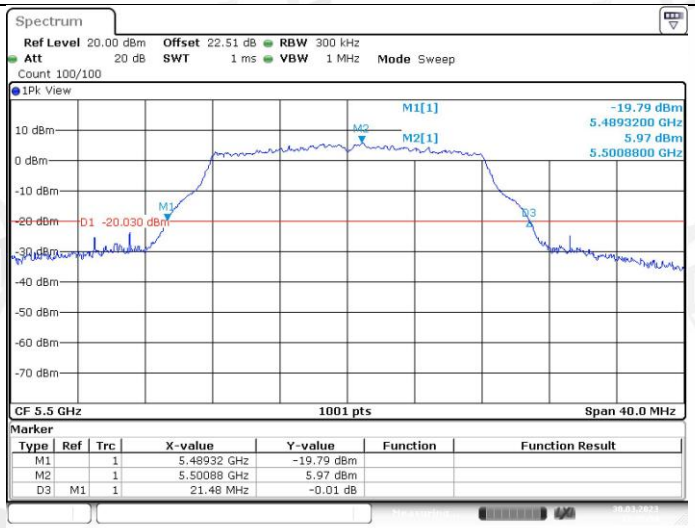

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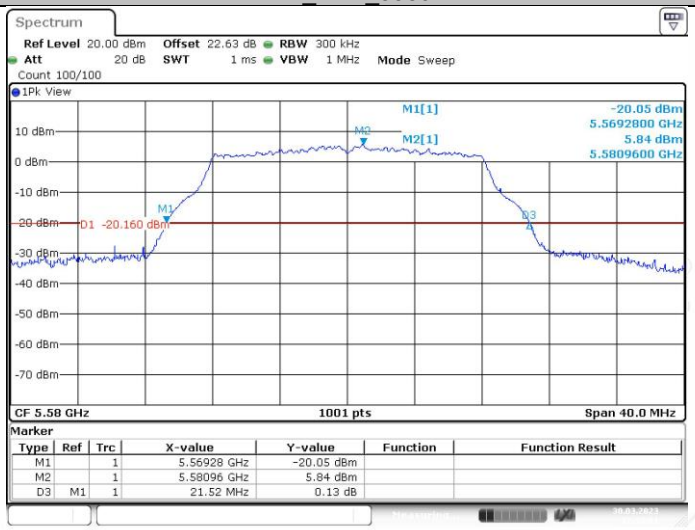

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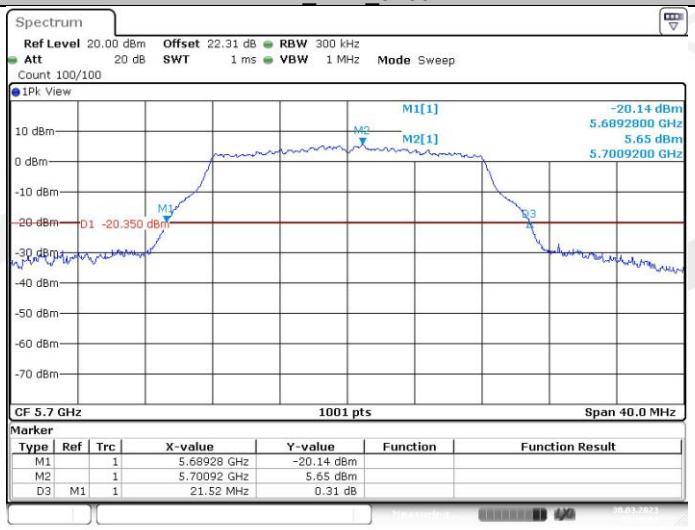

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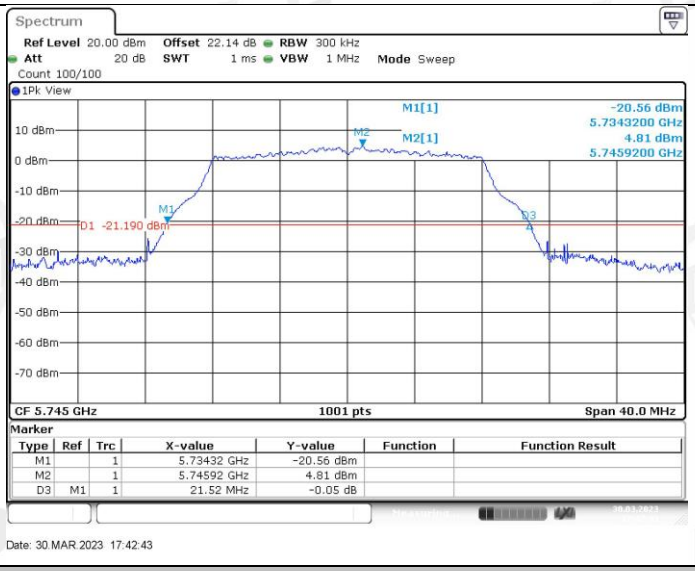

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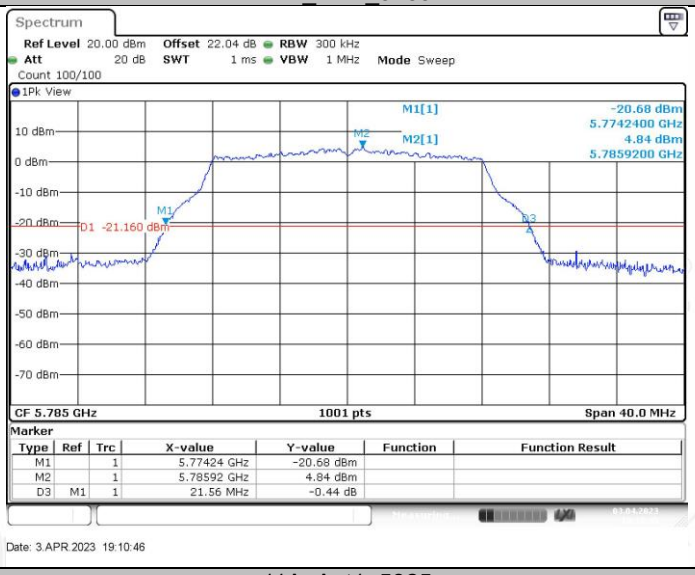

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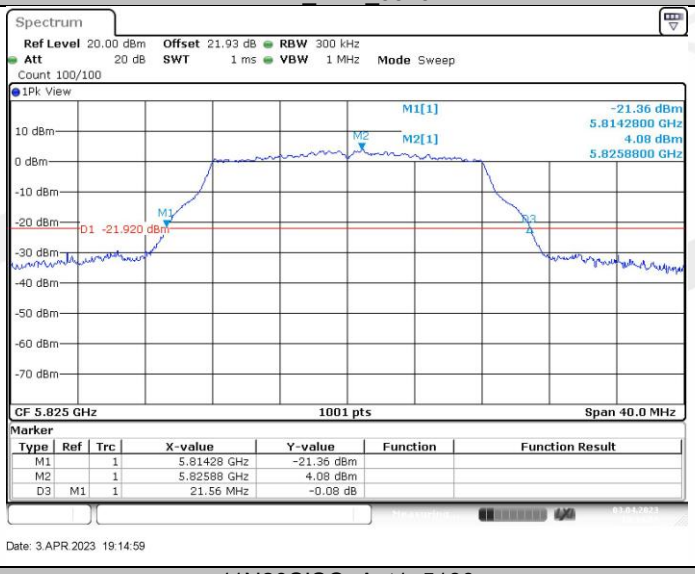

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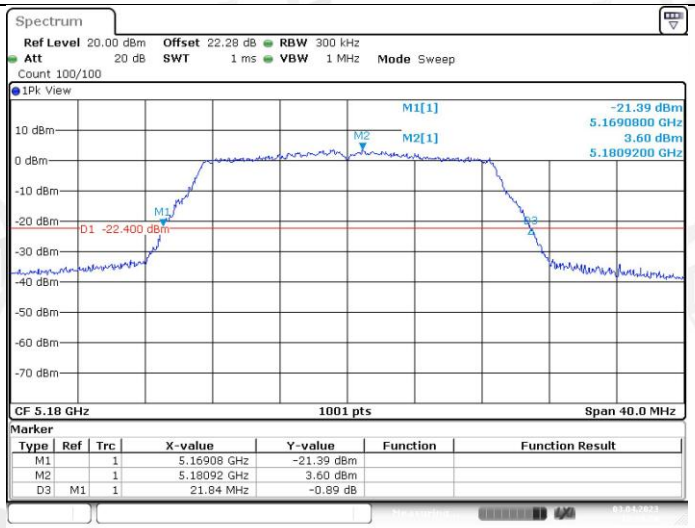

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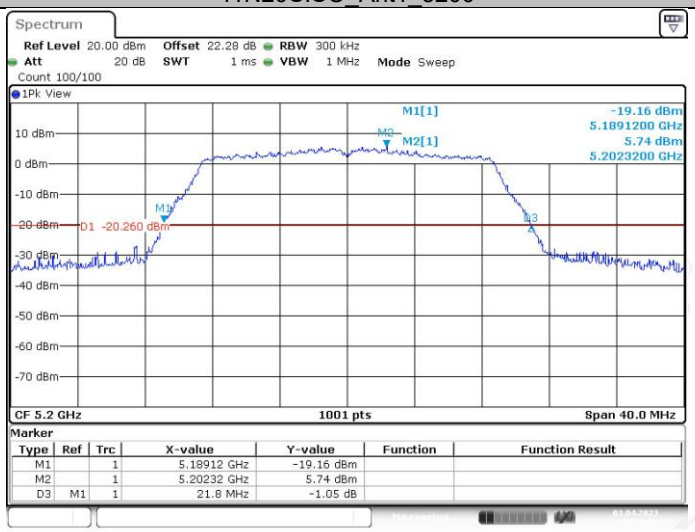

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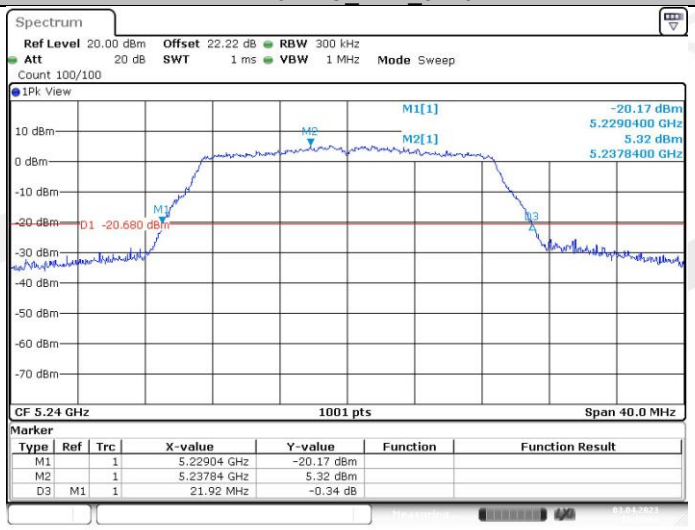

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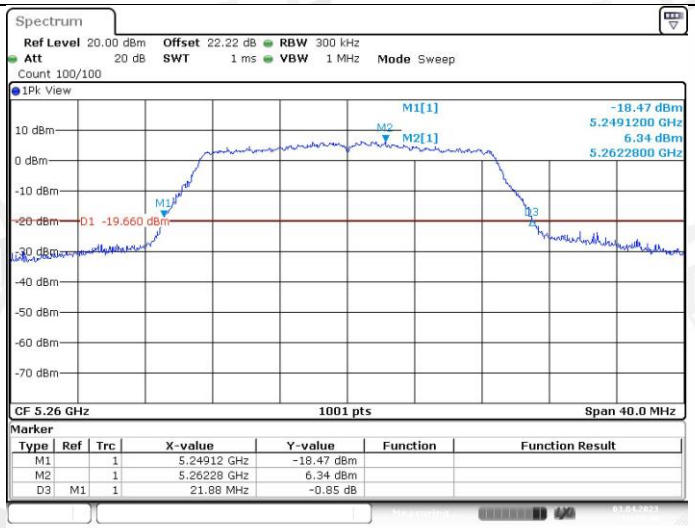

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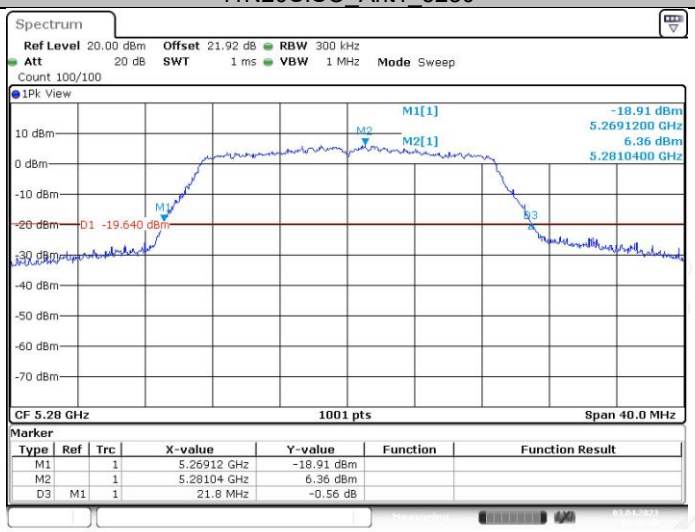

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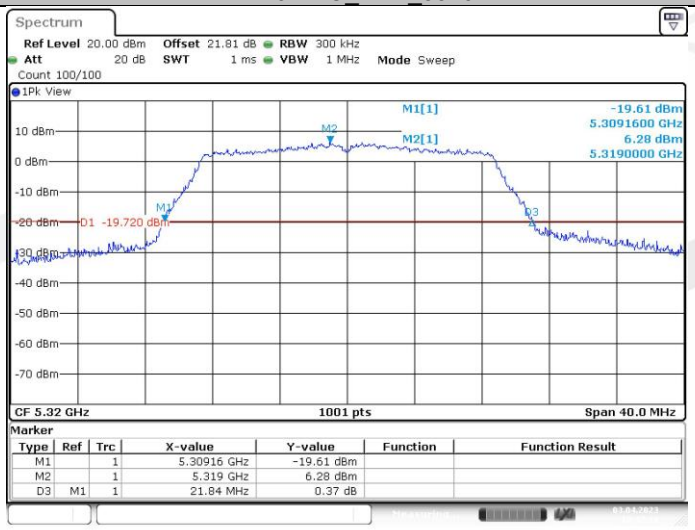

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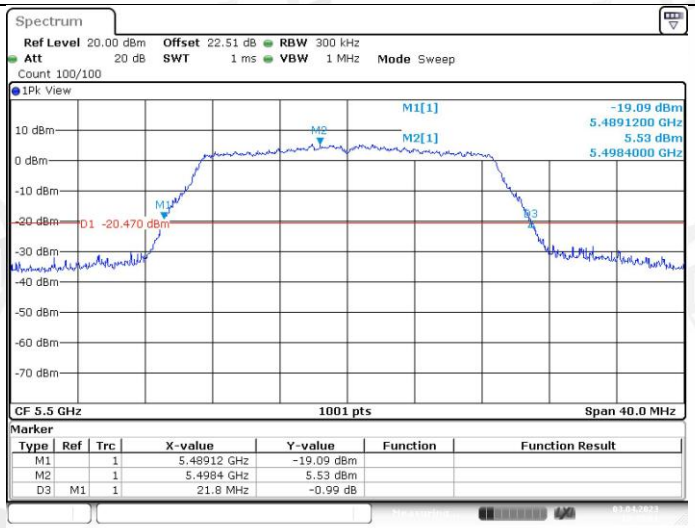

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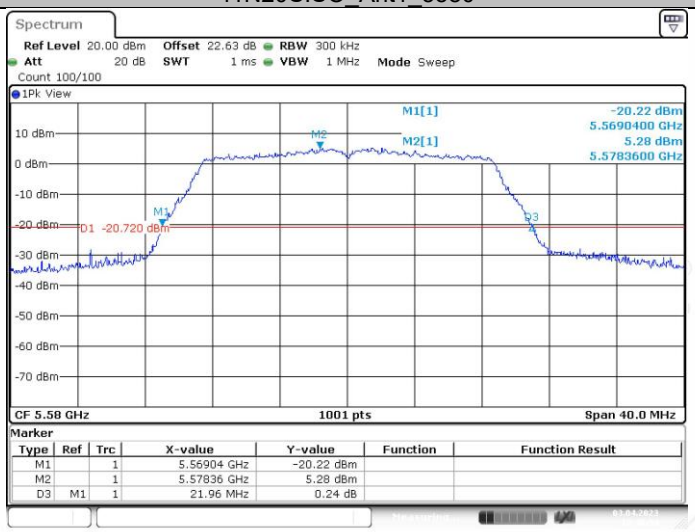

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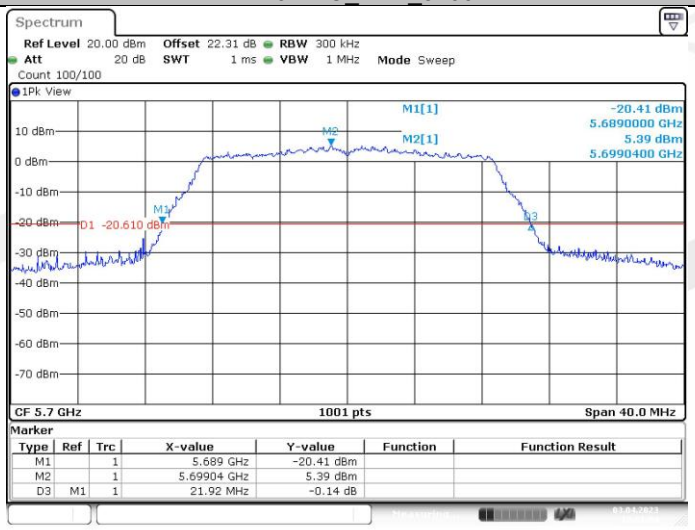

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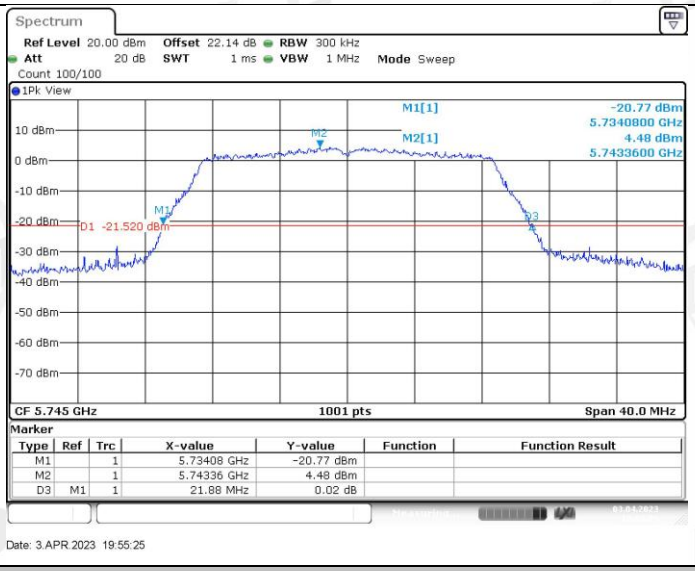

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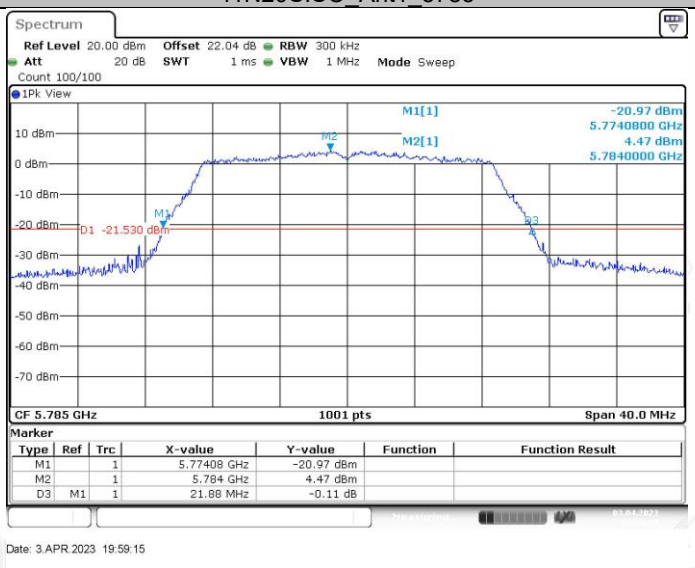

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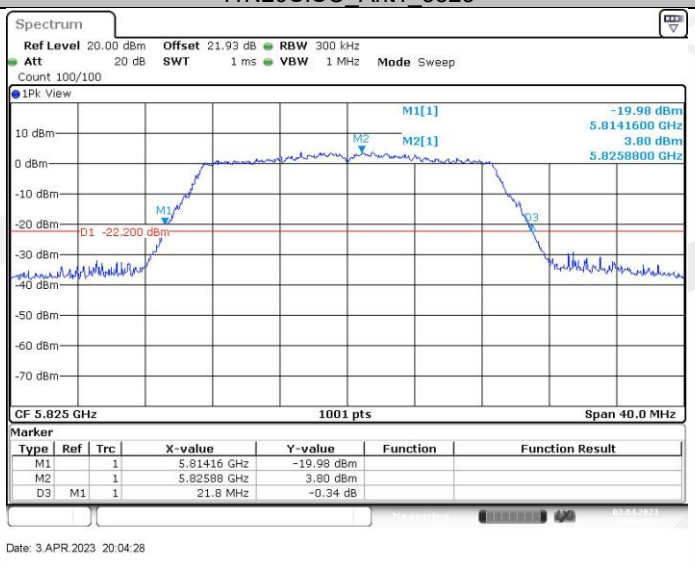

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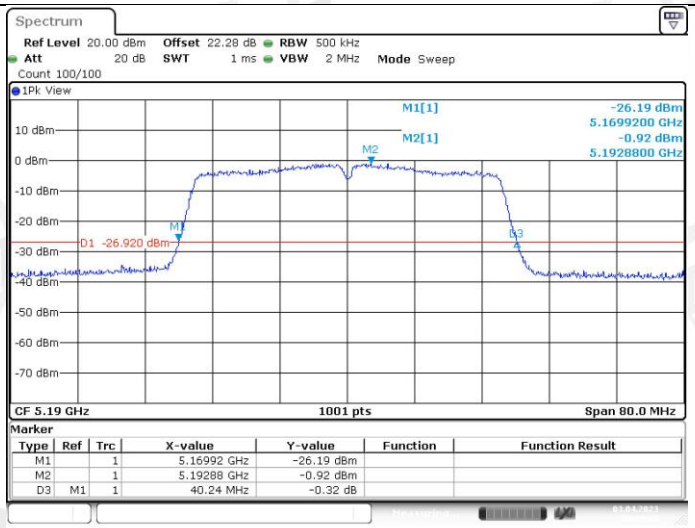

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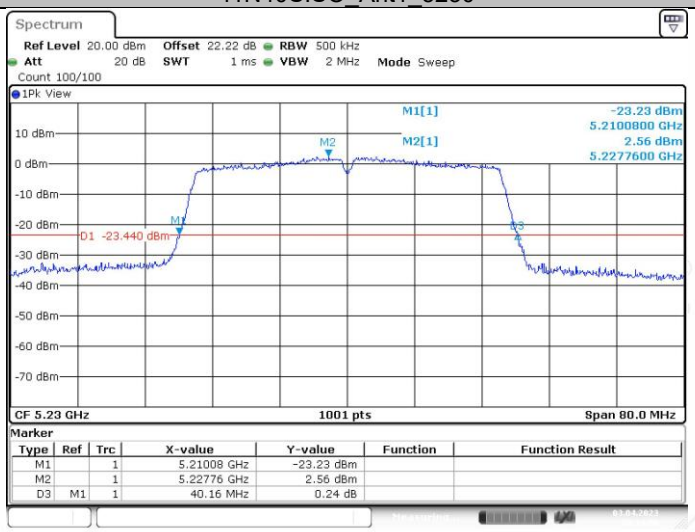

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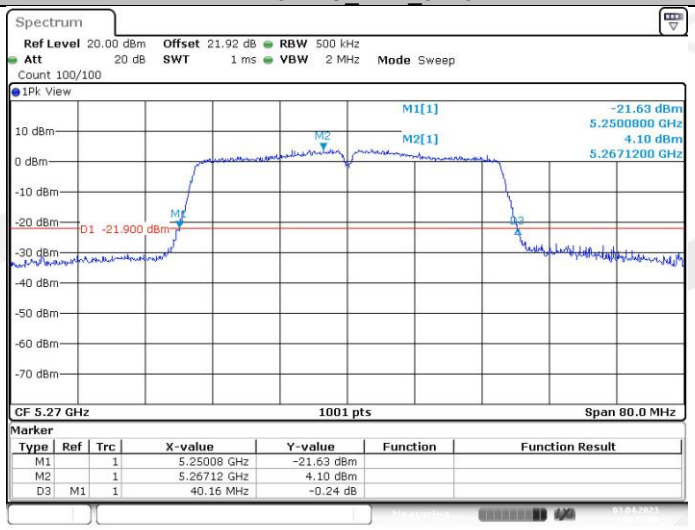

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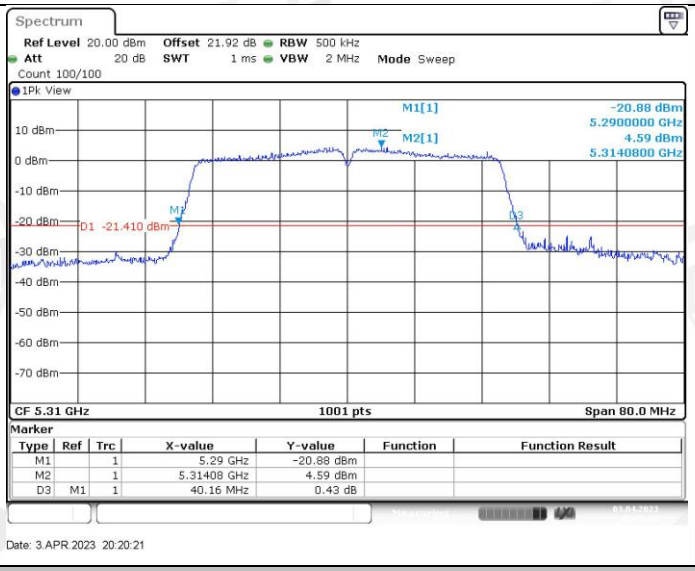

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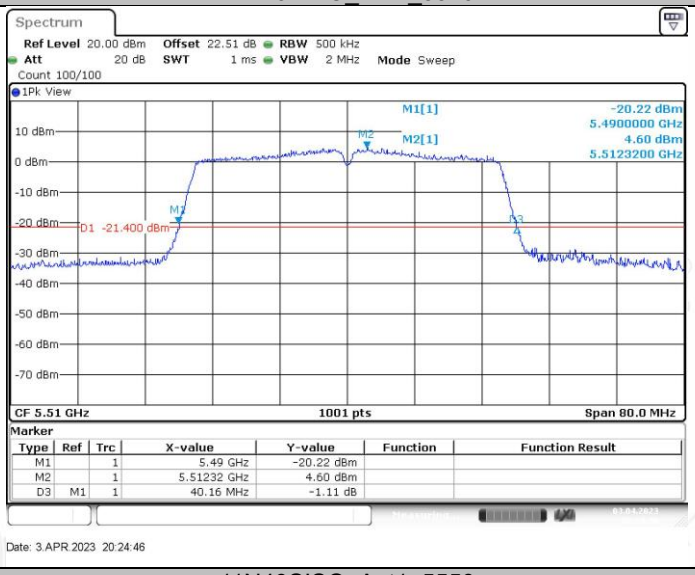

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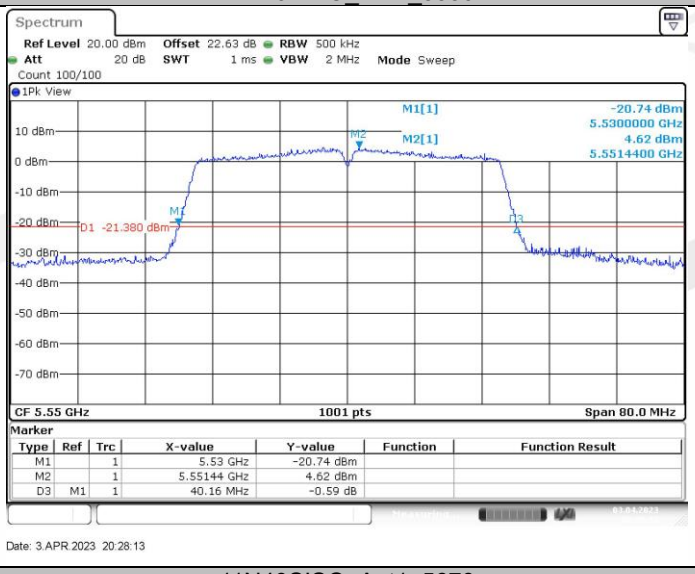

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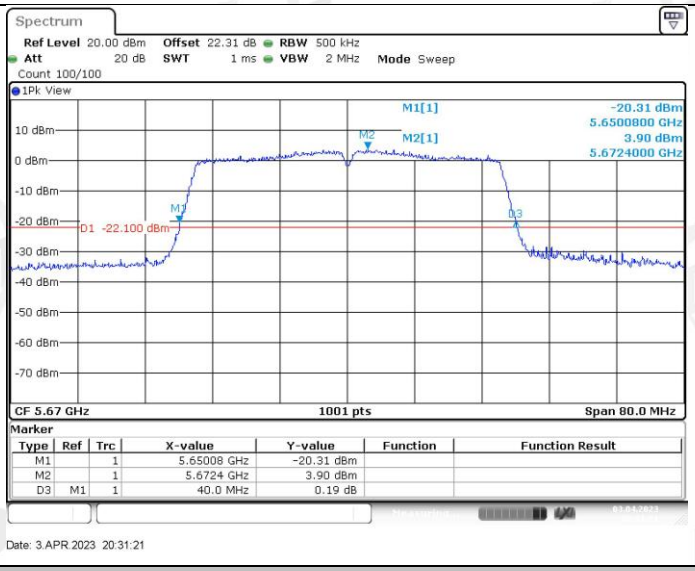

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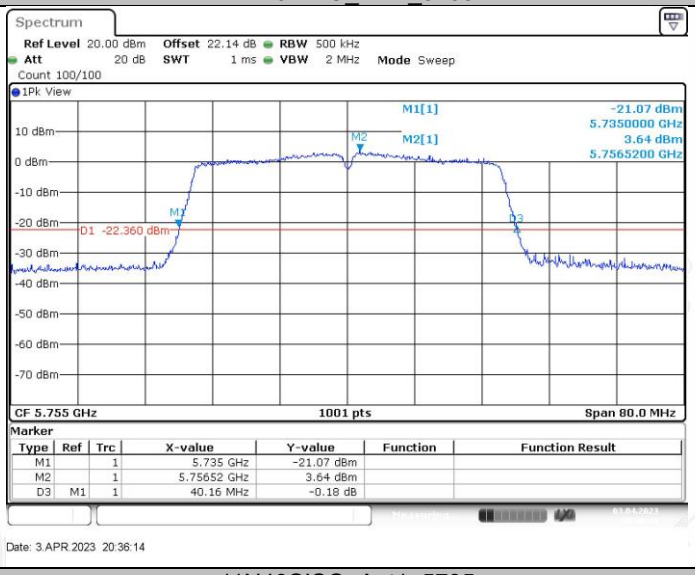

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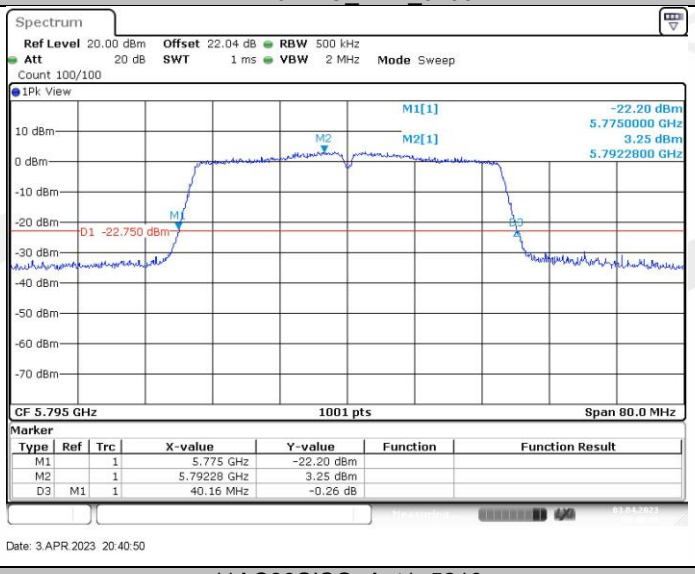
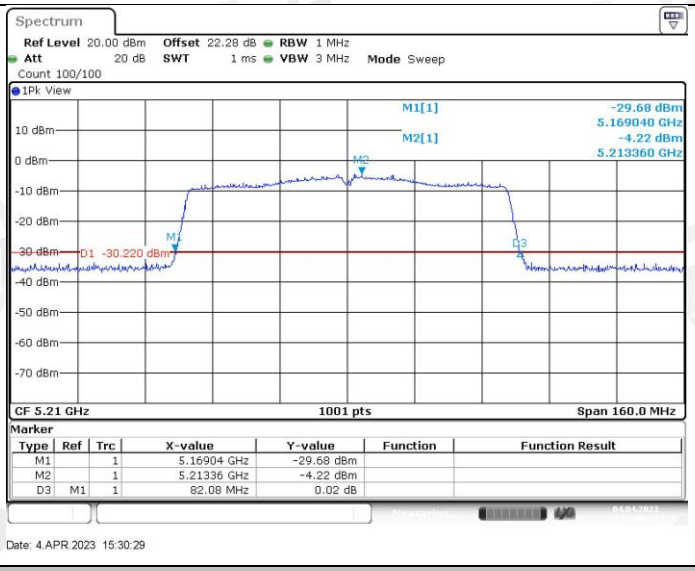


11AC80SISO_Ant1_5210



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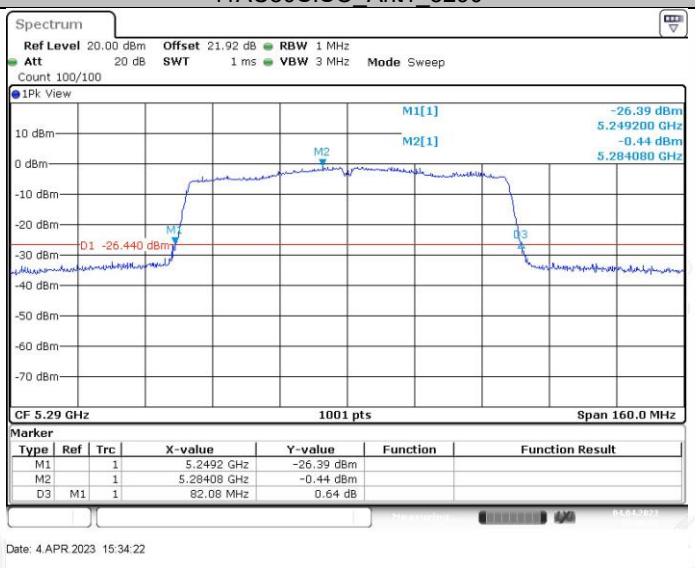

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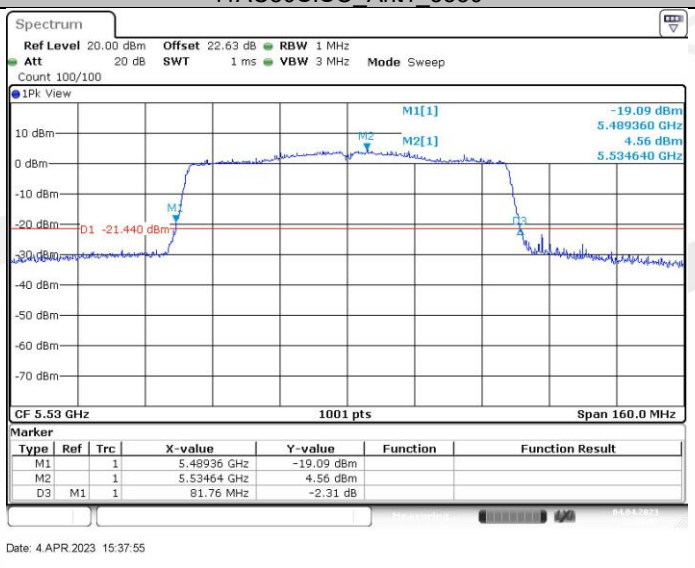

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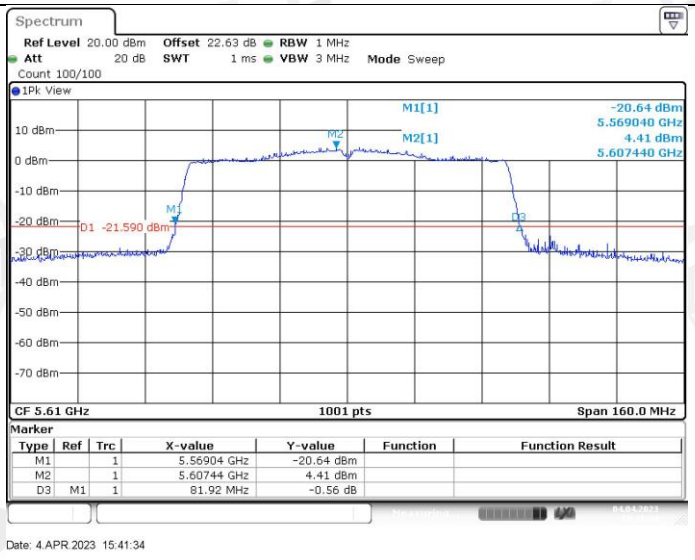

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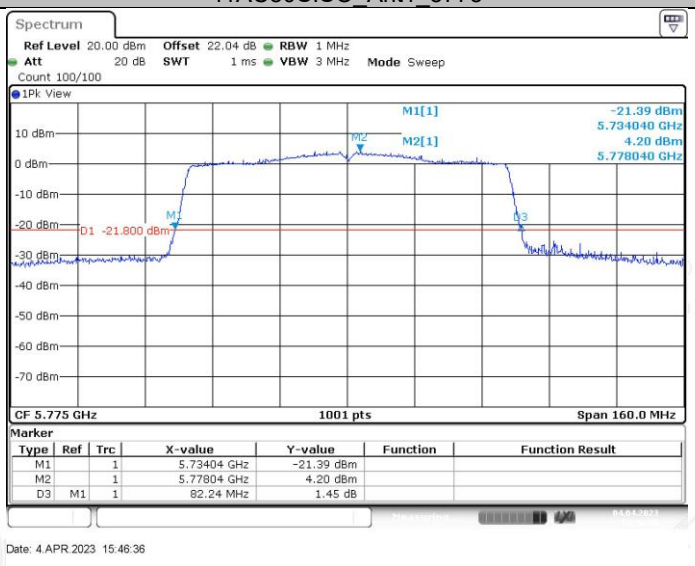
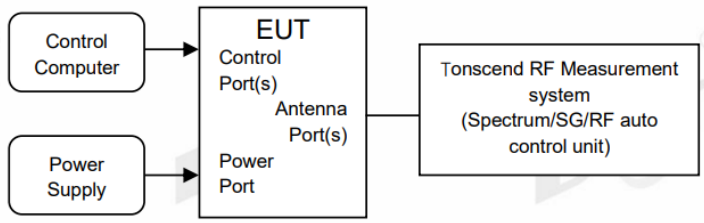


5. 6dB Bandwidth

5.1. Block diagram of test setup



5.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
6 dB Bandwidth	Minimum 500 kHz	5725 - 5850

5.3. Test procedure

Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 6 dB Bandwidth: RBW=100 kHz For 26 dB Bandwidth: approximately 1% of the emission bandwidth.
VBW	For 6 dB Bandwidth: VBW=300 kHz For 26 dB Bandwidth: >3 RBW
Trace	Max hold
Sweep	Auto couple

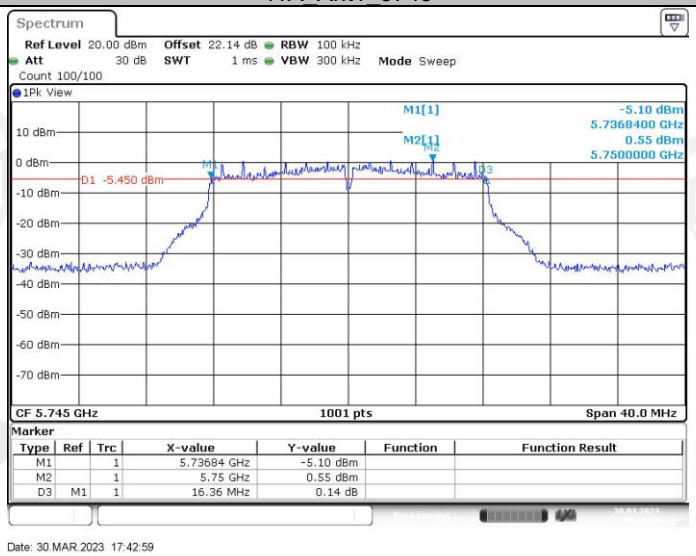
Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

5.4. Test result B4

Test Mode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.36	5736.84	5753.20	0.5	PASS
		5785	16.32	5776.88	5793.20	0.5	PASS
		5825	16.32	5816.84	5833.16	0.5	PASS
11N20SISO	Ant1	5745	17.56	5736.24	5753.80	0.5	PASS
		5785	17.56	5776.24	5793.80	0.5	PASS
		5825	17.32	5816.48	5833.80	0.5	PASS
11N40SISO	Ant1	5755	36.08	5737.08	5773.16	0.5	PASS
		5795	35.84	5777.08	5812.92	0.5	PASS
11AC80SISO	Ant1	5775	75.20	5737.40	5812.60	0.5	PASS

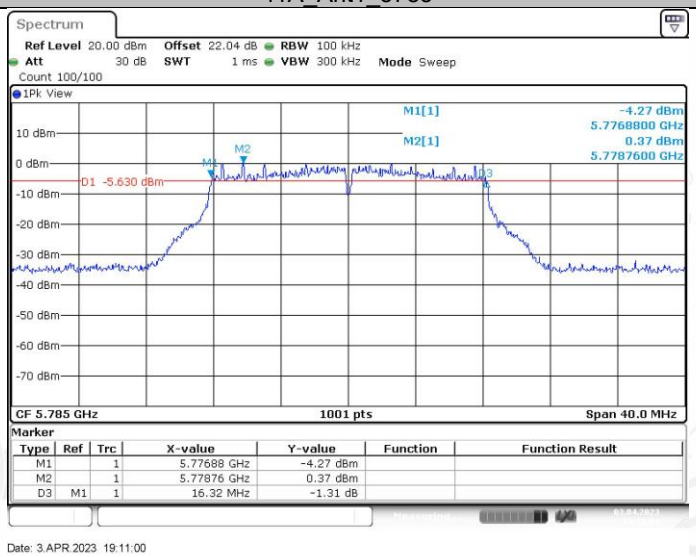
5.5. Test graphs B4

11A_Ant1_5745



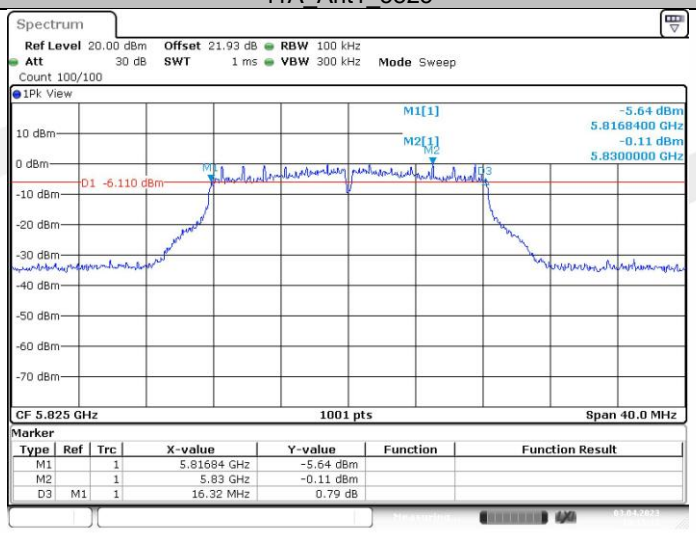
Date: 30.MAR.2023 17:42:59

11A_Ant1_5785



Date: 3.APR.2023 19:11:00

11A_Ant1_5825



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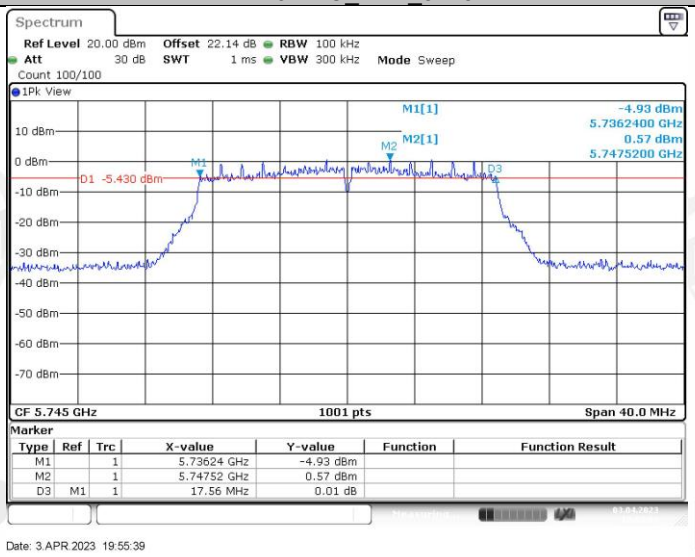
11N20SISO_Ant1_5745



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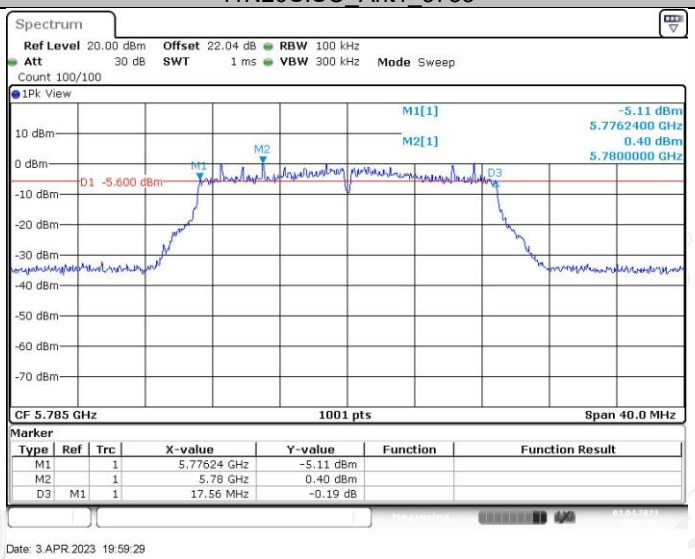

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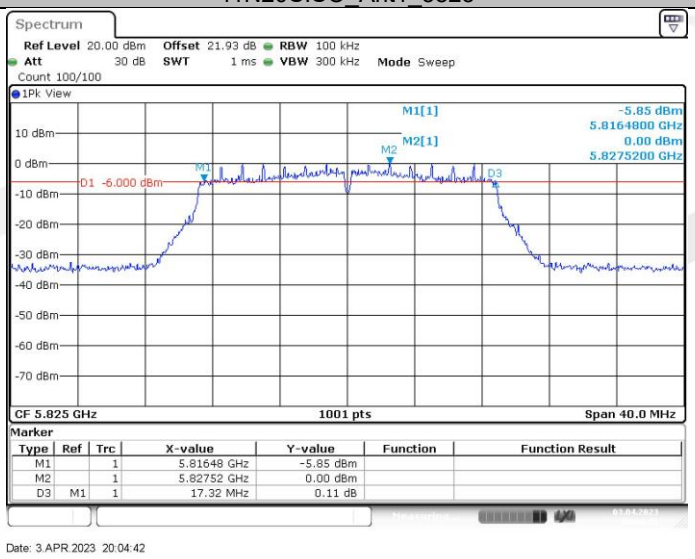

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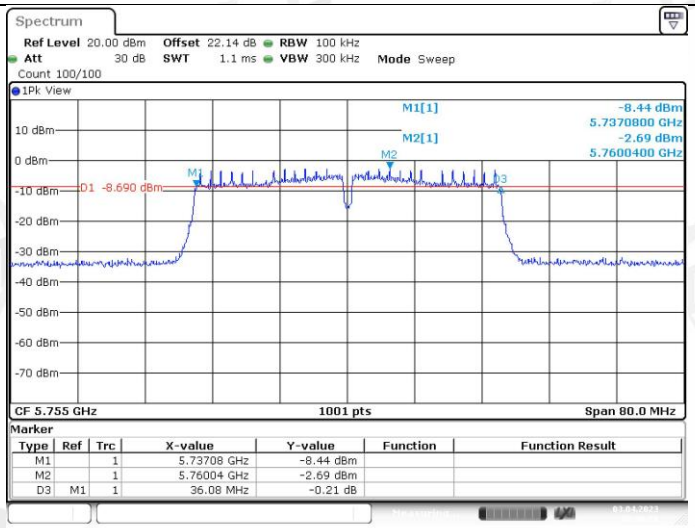

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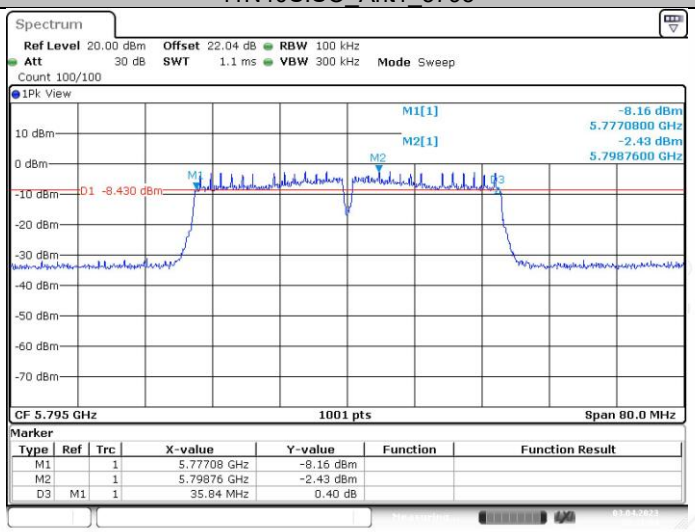

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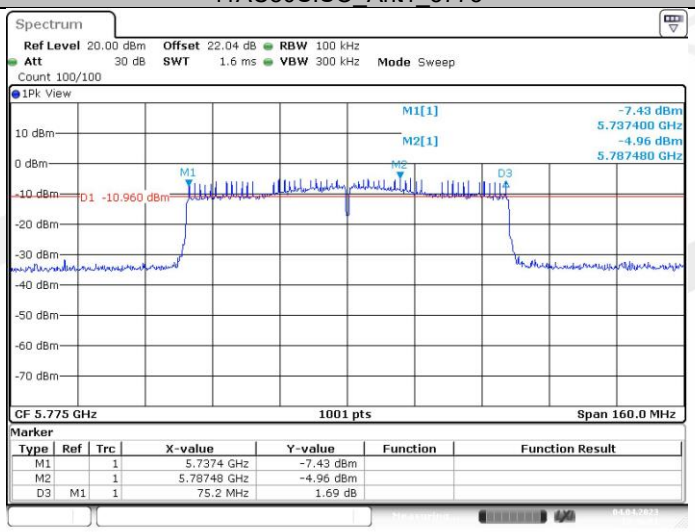
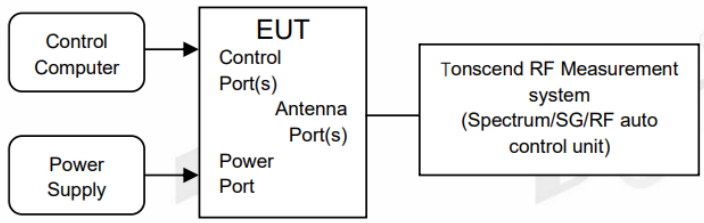


6. Duty Cycle

6.1. Block diagram of test setup



6.2. Limit

Just for Report.

6.3. Test procedure

(1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, The cable loss and attenuator loss have been put into spectrum analyzer as amplitude offset.

set the Spectrum Analyzer as below:

Centre Frequency: The centre frequency of the middle hopping channel.

Resolution BW: 10 MHz.

Video BW: 10 MHz.

Span: Zero span.

Detector: Peak.

Trace Mode: Max Hold.

Sweep: Video Trigger

(2) When the trace is complete, measure the sending time of 1 burst and the duty cycle of 1 burst cycle.

(3) Calculate dwell time follow below formula:

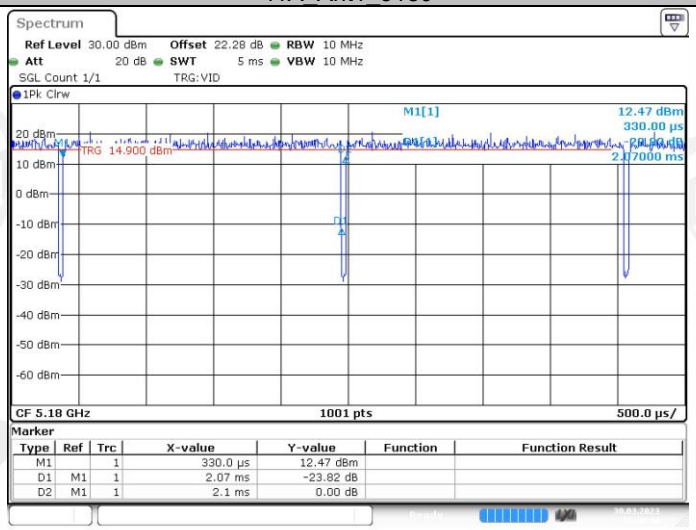
Duty cycle= Pulse's on time / Burst cycle

6.4. Test result

Test Mode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5180	2.07	2.10	98.57
		5200	2.06	2.10	98.10
		5240	2.06	2.10	98.10
		5260	2.07	2.10	98.57
		5280	2.07	2.10	98.57
		5320	2.07	2.10	98.57
		5500	2.07	2.10	98.57
		5580	2.07	2.10	98.57
		5700	2.06	2.10	98.10
		5745	2.07	2.10	98.57
		5785	2.06	2.10	98.10
		5825	2.07	2.10	98.57
11N20SISO	Ant1	5180	1.93	1.96	98.47
		5200	1.92	1.96	97.96
		5240	1.92	1.96	97.96
		5260	1.92	1.96	97.96
		5280	1.92	1.95	98.46
		5320	1.93	1.96	98.47
		5500	1.92	1.95	98.46
		5580	1.92	1.95	98.46
		5700	1.92	1.95	98.46
		5745	1.92	1.95	98.46
		5785	1.93	1.96	98.47
		5825	1.92	1.95	98.46
11N40SISO	Ant1	5190	0.94	0.97	96.91
		5230	0.95	0.97	97.94
		5270	0.94	0.97	96.91
		5310	0.95	0.97	97.94
		5510	0.95	0.97	97.94
		5550	0.95	0.97	97.94
		5670	0.95	0.97	97.94
		5755	0.95	0.97	97.94
		5795	0.95	0.97	97.94
11AC20SISO	Ant1	5180	1.94	1.97	98.48
		5200	1.93	1.97	97.97
		5240	1.93	1.96	98.47
		5260	1.93	1.97	97.97
		5280	1.93	1.97	97.97
		5320	1.93	1.96	98.47
		5500	1.93	1.96	98.47
		5580	1.93	1.96	98.47
		5700	1.93	1.96	98.47
		5745	1.93	1.97	97.97
		5785	1.94	1.97	98.48
		5825	1.93	1.97	97.97
11AC40SISO	Ant1	5190	1.25	1.27	98.43
		5230	1.25	1.28	97.66
		5270	1.25	1.27	98.43
		5310	1.25	1.27	98.43
		5510	1.25	1.27	98.43
		5550	1.25	1.28	97.66
		5670	1.25	1.27	98.43
		5755	1.25	1.27	98.43
		5795	1.25	1.28	97.66
11AC80SISO	Ant1	5210	0.68	0.70	97.14
		5290	0.68	0.70	97.14
		5530	0.68	0.70	97.14
		5610	0.69	0.71	97.18
		5775	0.68	0.70	97.14

6.5. Test graphs

11A_Ant1_5180



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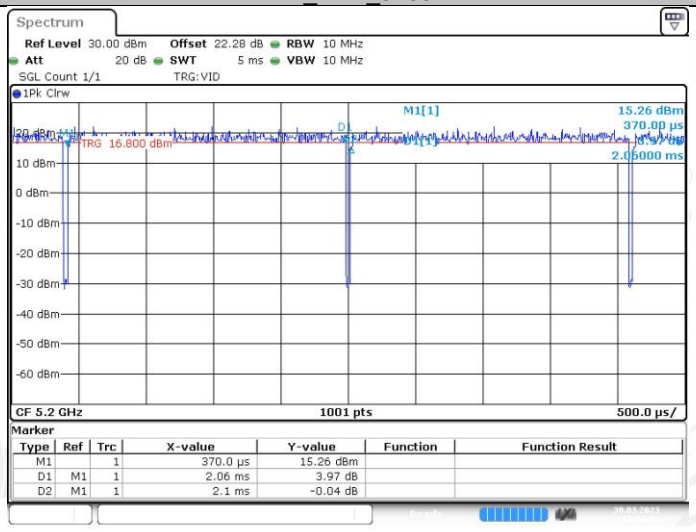

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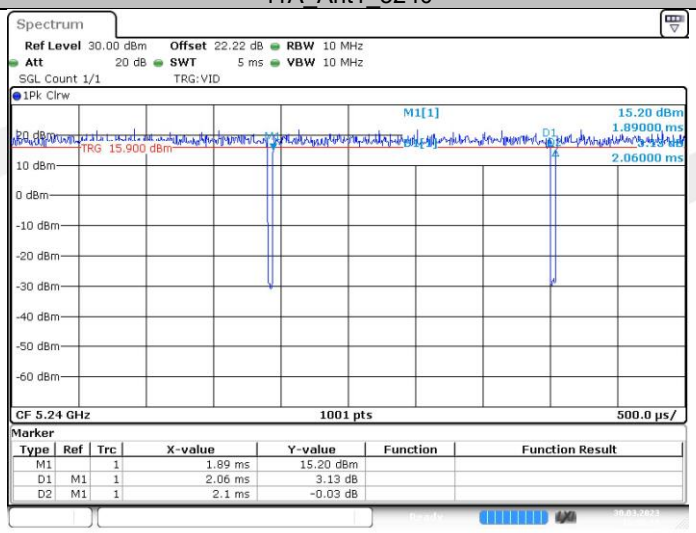

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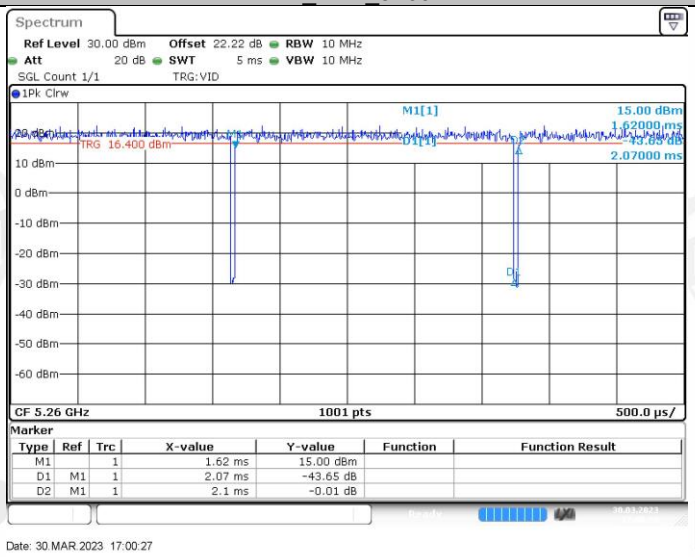
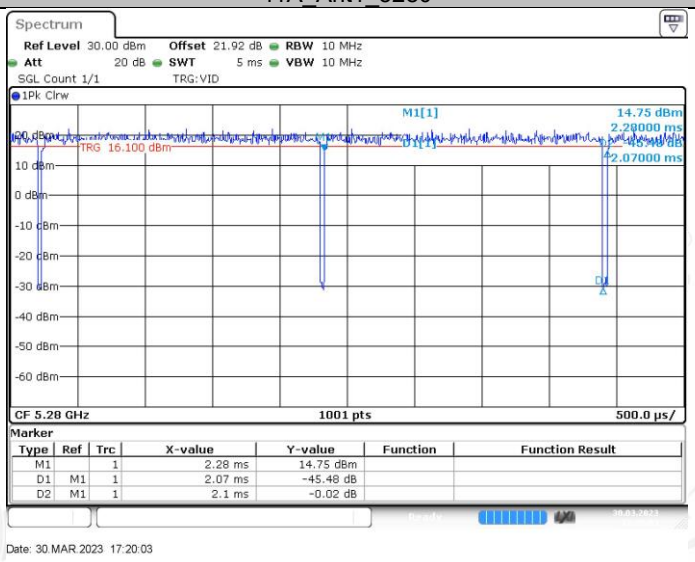


11A_Ant1_5280



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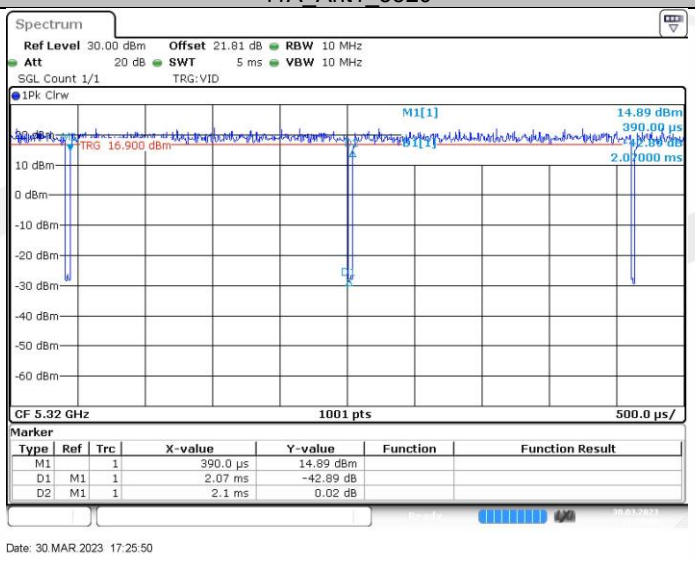

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